

**PLUMBING GENERAL NOTES**

**PART 1 GENERAL**

**1.01 PURPOSE**

THESE OUTLINE SPECIFICATIONS ARE NOT INTENDED TO COVER ALL NECESSARY ITEMS, BUT TO SERVE AS A GUIDE TO FURNISH AND INSTALL A COMPLETE PLUMBING SYSTEM AS DESCRIBED HEREIN.

**1.02 SCOPE OF WORK**

FURNISH AND INSTALL THE PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING.

- A. EXCAVATION AND BACKFILL REQUIRED FOR THE INSTALLATION OF THE PLUMBING SYSTEMS.
- B. CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE PLUMBING SYSTEMS.
- C. REMOVALS AS REQUIRED AND/OR AS INDICATED.
- D. SANITARY WASTE AND VENT PIPING SYSTEM INCLUDING PIPING TO ALL FIXTURES OR EQUIPMENT AS INDICATED.
- E. FIRE STOP INCLUDING SLEEVES THRU RATED WALLS AND FLOORS.
- F. ALL FITTINGS, HANGERS, SLEEVES, ESCUTCHEON PLATES, ANCHORS, GUIDES, ETC., REQUIRED FOR THE PLUMBING SYSTEM INSTALLATION, CHLORINATION, TESTING, ADJUSTMENT AND CLEANING OF ALL SYSTEMS AND EQUIPMENT.
- H. TEST THE SANITARY PIPING SYSTEM HYDROSTATICALLY AFTER INSTALLATION TO 10 FT. OF HEAD (4.3 PSI MAXIMUM). TESTING WITH COMPRESSED AIR OR GAS MAY RESULT IN INJURY OR DEATH.
- I. INSTRUCTION OF OWNERS' PERSONNEL AND OPERATING MANUALS FOR ALL EQUIPMENT.
- J. PERMITS, APPLICATIONS, TESTS AND ANY OTHER FEES RELATED TO THIS WORK.

**1.03 CONTRACT DRAWINGS**

IN GENERAL, DRAWINGS ARE SCHEMATIC IN NATURE AND ARE INTENDED AS A GUIDE TO THE CONTRACTOR, BUT DO NOT NECESSARILY SHOW ALL DETAILS, OFFSETS, ETC. ALL DRAWINGS ARE TO BE THOROUGHLY INSPECTED. THE CONTRACTOR'S WORK SHALL CONFORM TO THE INFORMATION CONTAINED IN THIS SPECIFICATION AND/OR AS INDICATED IN THE LATEST REVISION OF THE DRAWINGS REFERRED TO THEREIN. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER REGARDING ALL QUESTIONS ON WHICH HE MAY BE IN DOUBT BEFORE PROCEEDING WITH FABRICATION OF PARTS AFFECTED. THE CONTRACTOR SHALL PREPARE ALL ADDITIONAL DETAIL OR FIELD INSTALLATION DRAWINGS NECESSARY AT HIS OWN EXPENSE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS INDICATED ON THE ENGINEER'S LAYOUT DRAWINGS AND DETERMINE IF ANY CHANGES ARE REQUIRED IN PIPING RUNS, DRAINS, ETC., TO AVOID INTERFERENCE. MAJOR CHANGES SHALL NOT BE MADE WITHOUT THE APPROVAL OF THE ENGINEER. WHILE THE DRAWINGS ARE TO BE ADHERED TO AS CLOSELY AS POSSIBLE, THE CONTRACTOR HAS THE RIGHT TO VARY THE RUN OF CONDUITS, PIPING AND/OR DUCTS DURING PROGRESS OF THE WORK AS MAY BE FOUND NECESSARY OR DESIRABLE TO AVOID INTERFERENCES. MAJOR REVISIONS SHALL BE VERIFIED WITH THE ENGINEER.

**1.04 VERIFICATION**

BEFORE RUNNING ANY PIPING, ETC., WITHIN THE BUILDING, THIS CONTRACTOR SHALL ASSURE HIMSELF THAT THEY CAN BE INSTALLED AS CONTEMPLATED WITHOUT TRAPPING OR INTERFERING WITH COLUMNS, BEAMS, PIPING, FIXTURES, ETC. ANY NECESSARY MAJOR DEVIATION SHALL BE REFERRED TO THE ENGINEER FOR ADJUSTMENT BEFORE LINES ARE RUN, AT NO INCREASE IN CONTRACT PRICE. OF NECESSITY, OPENINGS, SUPPORTING STEEL, FIELD-BUILT CURBS, SPACE REQUIREMENTS, ETC., WERE DESIGNED AROUND SPECIFIC PARAMETERS. WHEN THE CONTRACTOR DETERMINES THE MAKE OF EQUIPMENT TO BE PROVIDED FOR THE JOB, IT SHALL BE HIS RESPONSIBILITY TO VERIFY AND COORDINATE UNIT DIMENSIONS WITH THE GENERAL CONTRACTOR AND ALL OTHER INTERESTED CONTRACTORS ON THE JOB. IT SHALL ALSO BECOME THE CONTRACTOR'S RESPONSIBILITY TO CHANGE AS NECESSARY, THROUGH THE ENGINEER, ALL REQUIRED DIMENSIONS SO THAT OPENINGS, SUPPORTING STEEL, CURBS, ELECTRICAL DATA, ETC., WILL FIT THE EQUIPMENT SUPPLIED. ANY ADDITIONAL COST WILL BE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. IN ADDITION, ELECTRICAL POWER, INTERLOCK AND CONTROL DIAGRAMS AND PIPING ARRANGEMENTS WERE DESIGNED AROUND ONE SPECIFIC MANUFACTURER. IF ADDITIONAL WIRING, PIPING CONTROLS, ETC., IS REQUIRED FOR OTHER EQUIPMENT, THIS CONTRACTOR SHALL INCLUDE THE COST OF THE SAME IN HIS PRICE. DIMENSIONS, ELEVATIONS AND RELATIVE LOCATIONS OF EXISTING EQUIPMENT, SEWERS, PIPES, DUCTS, CONDUITS, ETC., IN PLACE AS SHOWN ON THE DRAWINGS, ARE TAKEN FROM AS-BUILT AND RECORD DRAWINGS AND ARE DEEMED RELIABLE ONLY INsofar AS GENERAL LAYOUT IS CONCERNED. SUCH DIMENSIONS SHALL NOT BE USED FOR LAYOUT DRAWINGS OR DETAILING OF COMPONENTS. THE RESPONSIBILITY FOR CHECKING IN PLACE ITEMS WILL BE THE CONTRACTOR'S. ALL MEASUREMENTS, THE EXACT DETERMINATION OF RELATIVE ELEVATIONS OR LOCATIONS, THE ASCERTAINING OF ACCURACY OF ALL GIVEN ELEVATIONS AND DIMENSIONS AND THE OBTAINING OF ALL NECESSARY ADDITIONAL INFORMATION TO INSURE THE PROPER FIT AND COORDINATION OF ALL CONDUIT EQUIPMENT, DUCTS, AND PIPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**1.05 CONNECTIONS TO EXISTING WORK**

PLAN THE INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH THE REGULAR OPERATION OF THE EXISTING FACILITIES. SUBMIT TO THE ARCHITECT, FOR HIS APPROVAL, A PROGRESS SCHEDULE INDICATING ALL NECESSARY TEMPORARY SHUTDOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS WILL NOT INTERFERE WITH REGULAR OPERATION OF THE EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL FROM THE ARCHITECT.

**1.06 NEW WORK**

UNLESS OTHERWISE NOTED, ALL WORK INDICATED THROUGHOUT THESE DRAWINGS SHALL BE CONSIDERED TO BE NEW WORK AND SHALL BE INCLUDED AS AN INTEGRAL PART OF THIS CONTRACT.

**1.07 REFERENCED STANDARDS**

- 2018 MICHIGAN PLUMBING CODE
- 2015 MICHIGAN BUILDING CODE

**1.08 APPROVED MANUFACTURERS**

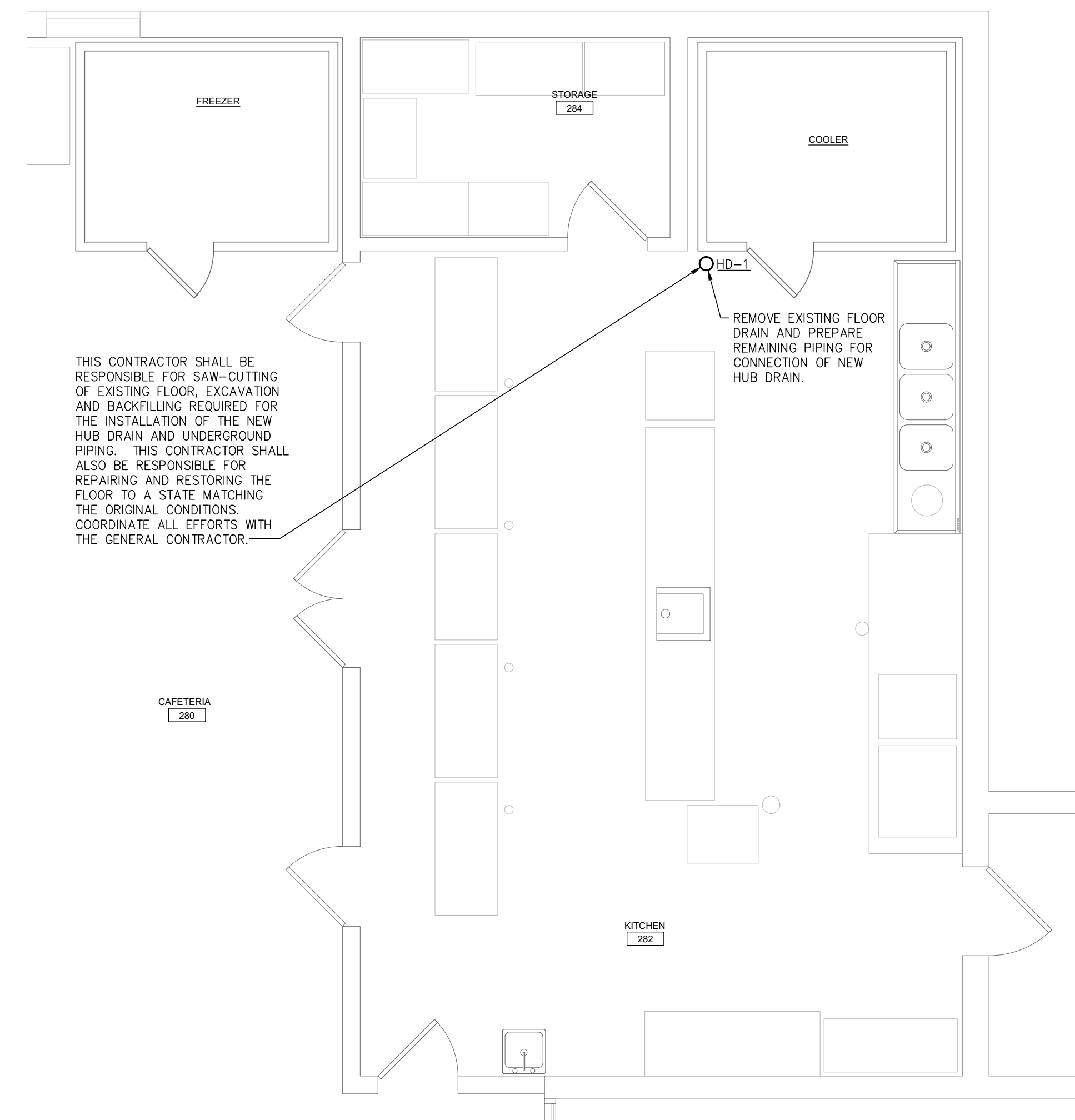
- 1. CLEANOUTS; ZURN, J.R. SMITH, MIFAB
- 2. HUB DRAINS; ZURN, J.R. SMITH, MIFAB

**PART 2 EXECUTION**

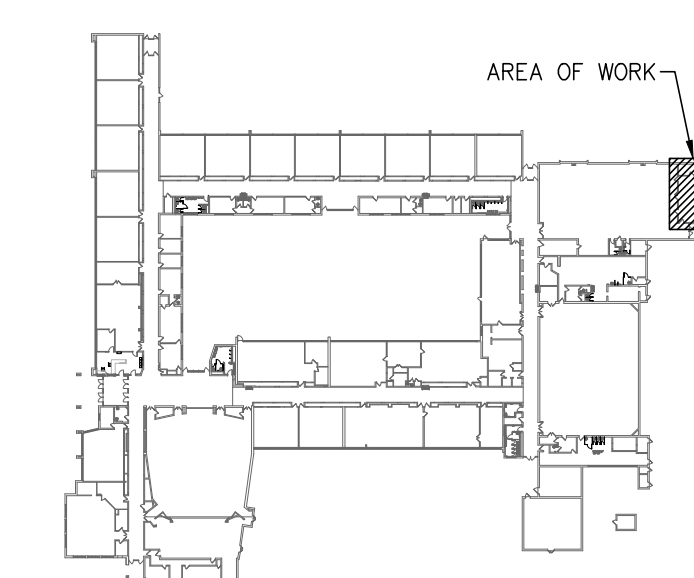
- A. ALL EQUIPMENT INSTALLATION PROCEDURES SHALL BE BASED ON FUNDAMENTAL ENGINEERING AND CONSTRUCTION PRINCIPLES IN CONFORMANCE WITH ALL APPLICABLE CODES, STANDARDS AND ORDINANCES.
- B. THE PLUMBING CONTRACTOR SHALL INSTALL ALL PLUMBING EQUIPMENT IN CONFORMANCE WITH MANUFACTURER ISSUED INSTRUCTIONS AND RECOMMENDATIONS.
- C. THE PLUMBING CONTRACTOR SHALL NOT KNOWINGLY INSTALL WORK THAT IS IN ERROR.
- D. PROVIDE TWO (2) YEAR WARRANTY ON ALL LABOR AND MATERIALS UNLESS NOTED OTHERWISE.
- E. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES REQUIRED FOR HIS WORK.
- F. THE PLUMBING CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF HIS COMPLETED WORK.
- G. THE SYSTEMS REPRESENTED IN THESE CONTRACT DOCUMENTS HAVE THE INTENT OF PROVIDING ENERGY-EFFICIENT, SAFETY AND COMFORT FOR THE PROPOSED FACILITY.
- H. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES ON THE PROJECT.

**PLUMBING LEGEND**

- V --- SANITARY VENT PIPING
- V --- EXISTING SANITARY VENT PIPING
- SAN --- SANITARY PIPING BELOW FLOOR
- SAN --- EXISTING SANITARY PIPING BELOW FLOOR
- SAN --- SANITARY PIPING ABOVE FLOOR
- ////// PIPING DEMOLITION
- EQ. FLOOR CLEANOUT
- W.C.D. WALL CLEANOUT
- A.F.F. ABOVE FINISHED FLOOR
- F.F.E. FINISHED FLOOR ELEVATION
- I.E. INVERT ELEVATION
- P.C. PLUMBING CONTRACTOR
- G.C. GENERAL CONTRACTOR
- CONNECTION OF NEW TO EXISTING
- PIPING ELBOW DOWN
- PIPING ELBOW UP
- PIPING TEE DOWN
- PIPING TEE UP



**PARTIAL PLUMBING PLAN**  
SCALE: 1/4" = 1'-0"



**KEY PLAN**  
SCALE: NONE

**PLUMBING FIXTURE SCHEDULE**

DESCRIPTION	SYMBOL	CW	HW	WASTE	VENT	SPECIFICATIONS
STAINLESS STEEL HUB DRAIN	○	HD-1	---	---	3"	ZURN #Z1870, TYPE 304 STAINLESS STEEL WITH 6" INLET OPENING AND 3" DISCHARGE OUTLET. INSTALL TOP OF INLET 1" ABOVE FINISHED FLOOR. PROVIDE ASSE 1072 BARRIER TYPE TRAP SEAL PROTECTION DEVICE.

**PLUMBING DRAWING LIST**

DWG. NO.	TITLE	FILE NO.
P1.01	PLUMBING SPECIFICATIONS AND PARTIAL PLAN	24003612P1.01.dwg

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY ROBERT TIMOTHY BRANNAN, PE. USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED, AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



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03/11/2024

STATE OF MICHIGAN  
ROBERT T BRANNAN  
ENGINEER  
NO. 35872

DATE	DESCRIPTION
03.18.2024	BIDDING & STATE REVIEW

**COOLER / FREEZER REPLACEMENT & RELATED WORK**

AT  
**ARBORWOOD SOUTH ELEMENTARY**  
1008 RIVERVIEW AVENUE, MONROE, MI 48162  
FOR  
**MONROE PUBLIC SCHOOLS**  
1275 N. MACOMB STREET, MONROE, MI 48162

**JOB # 24103**

**PLUMBING SPECIFICATIONS AND PARTIAL PLAN**  
**P1.01**